People Working Cooperatively

The U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) launched the Weatherization Innovation Pilot Program (WIPP) to accelerate innovations in whole-house weatherization and advance DOE's goal of increasing the energy efficiency and health and safety of low-income homes. WIPP has worked with new service providers, as well as nontraditional partners, to leverage non-federal financial resources to supplement federal grants and save taxpayer money. WIPP complements the Weatherization Assistance Program (WAP), which operates nationwide, in U.S. territories and in three Native American tribes.

DOE selected 16 WIPP grantees to implement weatherization innovation projects, using experimental approaches to find new and better ways to weatherize homes.

These innovative approaches will improve key weatherization outcomes, such as:

- Increasing the total number of homes that are weatherized using non-federal leveraged funds
- Reducing the weatherization costs per home
- Increasing the energy savings in each weatherized home
- Increasing the number of weatherization jobs created and retained.

Evaluation

The success of these 16 programs will be evaluated and measured by the Oak Ridge National Laboratory (ORNL). The lessons learned and successful innovations implemented through these projects may be adopted for use in the WAP.

People Working Cooperatively

DOE awarded People Working Cooperatively (PWC) a Weatherization Innovation grant of $1.5 million to weatherize 336 low-income homes. Using an innovative approach that combines comprehensive energy conservation services with a unique combination of non-traditional partners and leveraged resources, this effort addresses the needs of PWC's clients, especially households with elderly and disabled members.

People Working Cooperatively is a Cincinnati, Ohio regional nonprofit that provides critical home repairs, energy conservation and home modifications for low-income, elderly and disabled homeowners, who need help living safely in their own homes. The PWC WIPP model offers a whole-house concept that includes minor and major home repairs and mobility services from non-federal funding sources, paired with DOE weatherization energy upgrades. It is a one-touch approach

Weatherization volunteer London Huenefeld works on air sealing a door. *Photo by Chris Cone Photography for PWC*

done simultaneously. Often the home repairs allow for additional weatherization measures to be completed, such as a roof replacement that enables the attic to be insulated. Another example is the installation of new windows, a measure normally not very cost-effective in the WAP, to allow for safety of egress and ease of operation as well as additional air sealing. Mobility improvements include wheelchair ramps and stability grab-bars. Clients who are in need of all three services receive the entire package simultaneously, provided at a lower cost than if each service was administered separately. Clients are also able to rely on PWC as a continuous home resource, helping to maintain the integrity and safety of their home throughout its lifetime. Older and disabled residents receive priority and have work completed for them early on in the process, thus ensuring a healthier and better quality of life. Younger and more able-bodied clients are educated on home maintenance and life skills through additional PWC programs.

> "By leveraging our different resources, PWC can save funds and deliver more value to the client," said Nina Creech, PWC's Executive Vice President of Operations.

PWC's WIPP grant came at an ideal time, helping to combat a long waiting list of potential recipients. The typical PWC client earns approximately $13,000 a year and is faced with hardships stemming from poor health, job loss, and/or natural aging. It was a challenge to help as many people who needed it, so the WIPP funding, which supported an additional 336 units, came as a life saver to folks needing basic weatherization assistance.

Volunteers, Partnerships Make Program Unique

What makes PWC's WIPP program successful is the achievement of the three-to-one funding match ratio of federal to non-federal dollars. PWC captured matching funds through direct labor costs and the integration of volunteer labor into service delivery. The PWC program exceeded 100 volunteers to deliver services to 336 households, a number that surpasses all initial expectations. The use of social media platforms like Facebook, has helped to promote the program even more and generate interest in volunteer opportunities. Students from Xavier University in Cincinnati were also able to tap into the program through a class called Building Physics. Dr. Gregory A. Braun, a physics professor at Xavier University stated, "Our environmental physics students benefit greatly from volunteering with People Working Cooperatively. They have the opportunity to experience classroom theory in practice and they get to see how these issues directly affect people in the community."

Other partners like the Cincinnati Zoo and The Greater Cincinnati Energy Alliance participated in a special one-day energy conservation event for PWC clients living in Avondale, a Cincinnati inner-city neighborhood. "Partnering with People Working Cooperatively was an excellent opportunity to bring together volunteers, skilled labor, and resources to improve homes in the Avondale community," said Lilah Glick, marketing director for the Greater Cincinnati Energy Alliance. "Our organizations worked together to share the value of investing in home energy improvements, an effort that benefits all residents by creating more comfortable, safe, and affordable homes."

Another unique aspect of the program is how PWC has trained volunteers to deliver client education, which focuses on the importance of energy conservation and energy-saving measures. PWC staff members trained employees from U.S. Bank to not only weatherize a client's home, but also to educate the client on the importance of behavioral changes, allowing them to save even more energy dollars.

Volunteer London Huenefeld drills holes for wall insulation installation. *Photo by Chris Cone Photography for PWC*

Volunteer David Legg insulates a water heater. *Photo by Chris Cone Photography for PWC*

Program Challenges

The challenges PWC initially faced in this program included the use of inexperienced volunteers for installing weatherization retrofits. Weatherization normally takes a highly-skilled building science professional in order to be successful. "Weatherization can be hard and it takes a special kind of volunteer to do it", said Creech, "We have found that the volunteers for WIPP are energized and enthused about their experience. They come out of it very positive and excited about the program." Creech also stated that the WIPP volunteers have tended to be interested in the science of energy conservation and/or the green ecology, and the positive benefits of energy saving.

> "The work is really interesting," said PWC volunteer David Legg. "It's intriguing to see the different techniques used to make a home more energy efficient."

Creative partnerships like Xavier University, the Cincinnati Zoo, The Greater Cincinnati Energy Alliance and others have proved to be the successful recruitment tool PWC has needed to attract the right kind of volunteers. The sustainability coordinator at the Cincinnati Zoo and Botanical Garden, Sofia Cifuentes, stated that, "Volunteering with the Avondale in Action project taught me a tremendous amount of information about how to weatherize a home. The best part was the hands-on work the volunteers were able to do so they could really understand and grasp the work. The PWC Crew Leaders explained the what, how and whys really well, and the homeowners and volunteers learned alongside one another. I left that day feeling confident about how to apply mastic to ductwork, insulation to hot water pipes and much more. It was a great experience!"

Program Successes

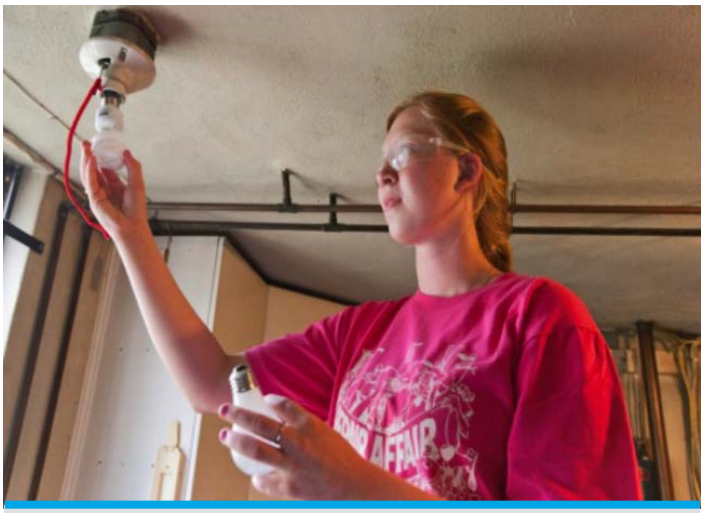
In addition to successfully forging unique partnerships and leveraging resources for lower-cost services, the program has been a big success with clients, which is reflected in high customer satisfaction ratings. PWC's research partner, The Cadmus Group, Inc. (Cadmus), is an evaluation firm specializing in assessing the effectiveness of various energy-efficiency programs around the country. Cadmus has over 20 years of experience in evaluating low-income focused energy programs, including several programs offering a more holistic array of services to low-income communities.

Cadmus is currently conducting research on three different groups of PWC energy conservation clients: clients who have only received traditional energy conservation services; clients who have received PWC's "whole-house" services, including energy conservation; and clients who have received PWC's "whole-house" services, with additional services provided through DOE. The study is ongoing and expected to be completed later this year. Participants in the study are being interviewed in their homes before and after services to determine program impacts. The interviews focus on participants' economic circumstances, their medical and emotional health, energy affordability, and the health and safety of their homes.

> "This is a different experience for volunteers," Creech said. "But it's an important service because the impact is helping homeowners stay in their home. It serves a larger need."

A recent evaluation by Cadmus and the Economics Center at the University of Cincinnati shows that PWC and its whole-house programs and services are strengthening the local community. The study revealed three key findings that show the broad impact of PWC's mission in the community:

- Housing Values Benefit – the value of the homes serviced with leveraged funds by PWC increased as did the homes in the surrounding neighborhood
- Student Success – students who avoided moving because of PWC services improved their academic performance
- Increase in Overall Health of Homeowners – owners of homes served by PWC benefitted from increased health and well-being. After PWC's services, 44% of clients reported improved health and 15% sought medical attention less frequently.



Volunteer Lindsey Hice changes an incandescent light bulb to a compact fluorescent bulb. *Photo by Chris Cone Photography for PWC*

Future Goals

PWC hopes to continue developing its whole-house service delivery model. "WIPP is proving to be valuable because it has expanded and enhanced our ability to serve more people," said PWC President Jock Pitts. "More work is being performed for very needy clients at a lower overall cost. Volunteers trained to reduce energy consumption in the home, along with the volunteers who are educating homeowners, have been an effective strategy to improve PWC's service delivery." Pitts also stated, "It's our responsibility to keep finding ways to serve people faster, smarter and better. WIPP moved the needle on improving PWC's service delivery and it will continue to pay many dividends going forward."

At the end of 2012 the PWC WIPP program will have weatherized 336 homes. To continue the good work, it will require more creative funding. Now that the community has seen the capabilities, hopes are high for continued services for the elderly and disabled.

For more information on Ohio's People Working Cooperatively, please visit:http://www.pwchomerepairs.org/ohio.aspx.

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